

FIG. 1

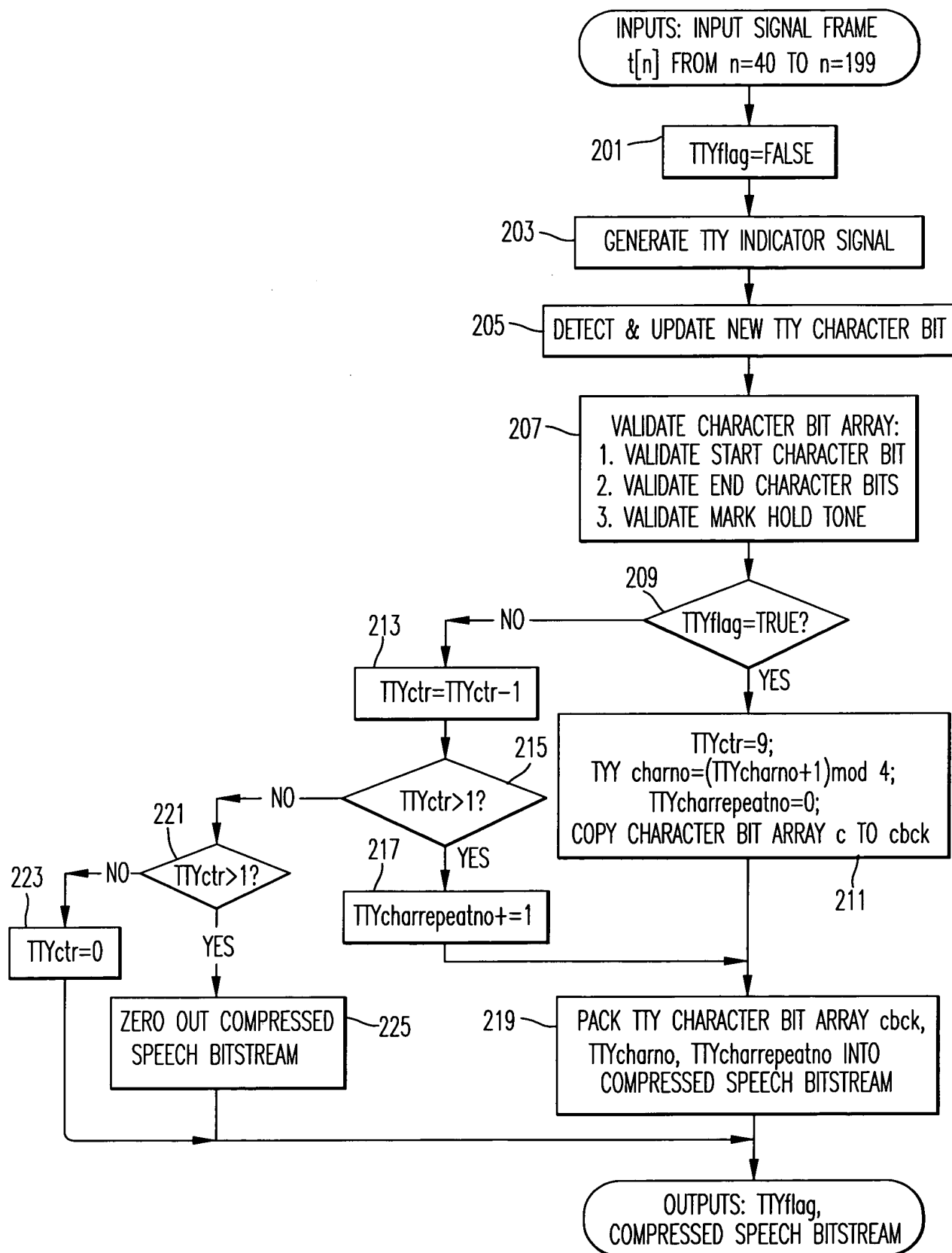


FIG. 2

009260" 092600

INPUTS: INPUT SIGNAL $t[n]$, HISTORY
OF SIGNALS $t_S[n]$, AND $t_M[n]$

FILTER $t[n]$ USING MARK BANDPASS FILTER TO GET $t_M[n]$ AND
SPACE BANDPASS FILTER TO GET $t_S[n]$ FOR $n=40$ TO $n=199$ 301

COMPUTE LOCAL ENERGIES $e[n]$, $e_M[n]$, AND $e_S[n]$ USING A
RECTANGULAR WINDOW OF THE SIGNALS $t[n]$, $t_M[n]$, AND $t_S[n]$
RESPECTIVELY FOR $n=16$ TO $n=183$ 303

COMPUTE TTY INDICATOR SIGNAL $w[n]$ FROM $n=16$ TO $n=183$ 305

COMPUTE MEDIAN FILTERED TTY INDICATOR SIGNAL $v[n]$
FROM $n=20$ TO $n=179$ 307

UPDATE SIGNAL BUFFERS $t[n]$, $t_M[n]$, AND $t_S[n]$ 309

OUTPUTS: MEDIAN FILTERED TTY INDICATOR SIGNAL $v[n]$
FROM $n=20$ TO $n=179$, UPDATED HISTORY OF SIGNALS $t[n]$,
 $t_M[n]$, AND $t_S[n]$

FIG. 3

009260" C8269960

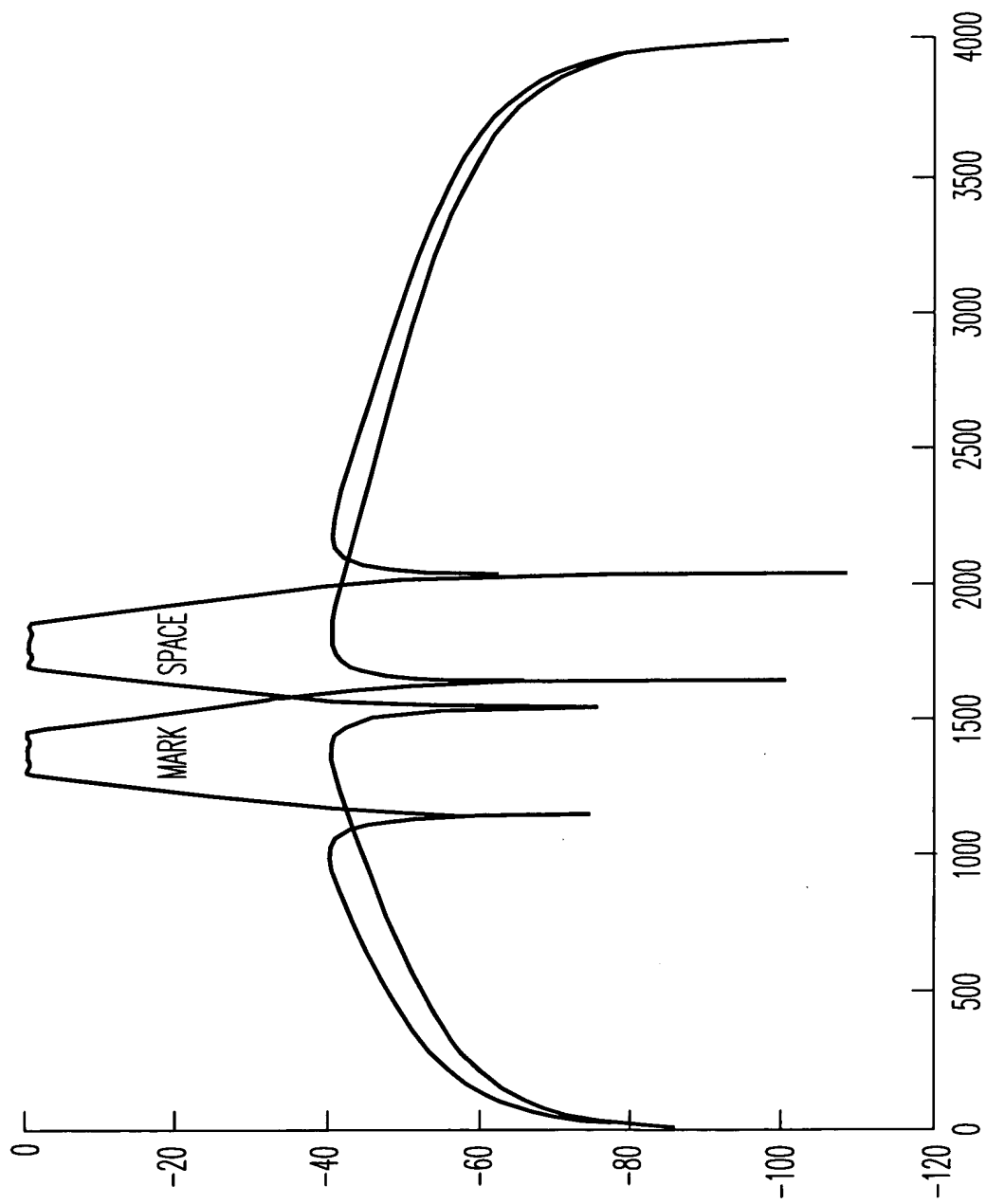


FIG. 5

009260" E0269960

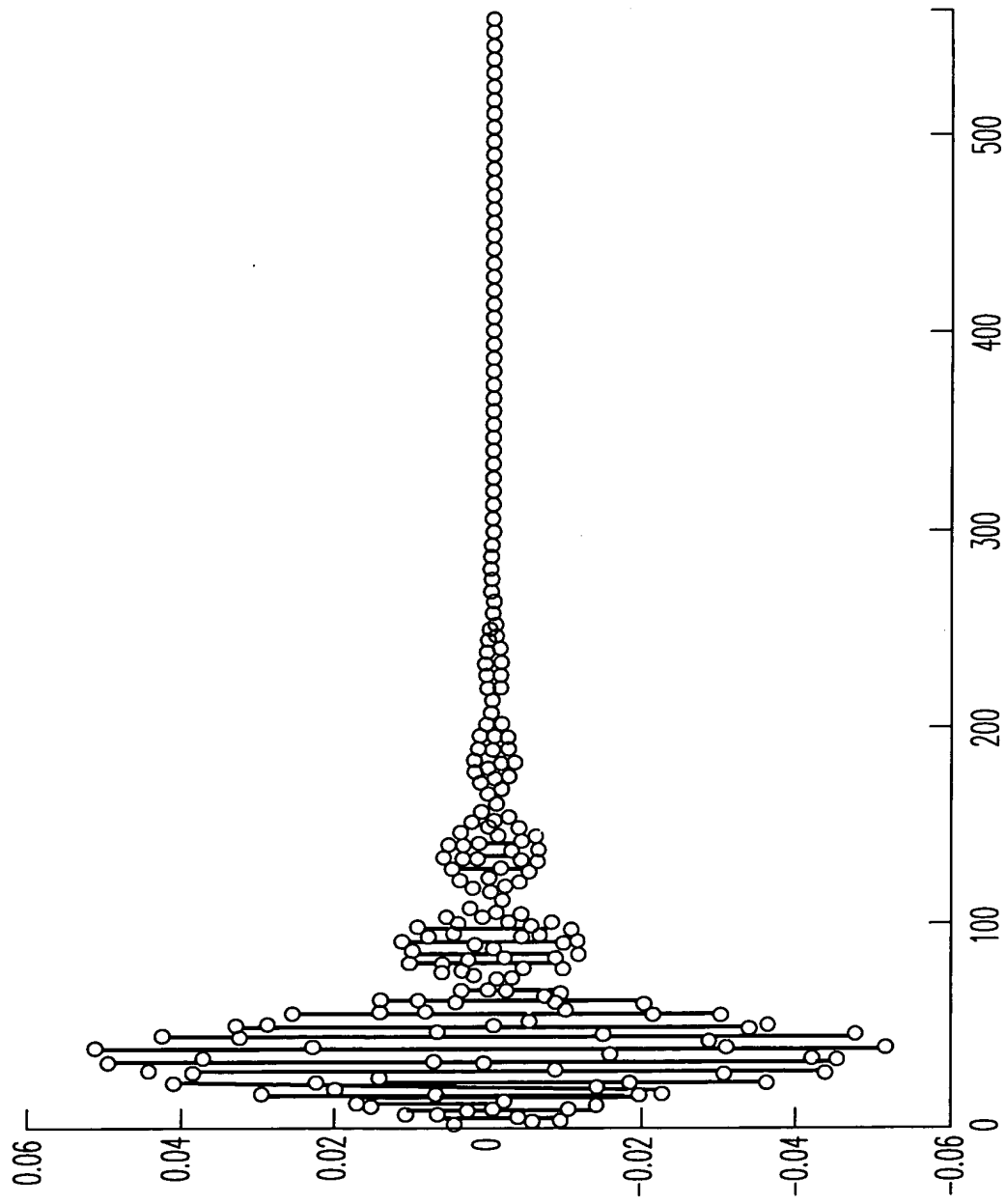


FIG. 6

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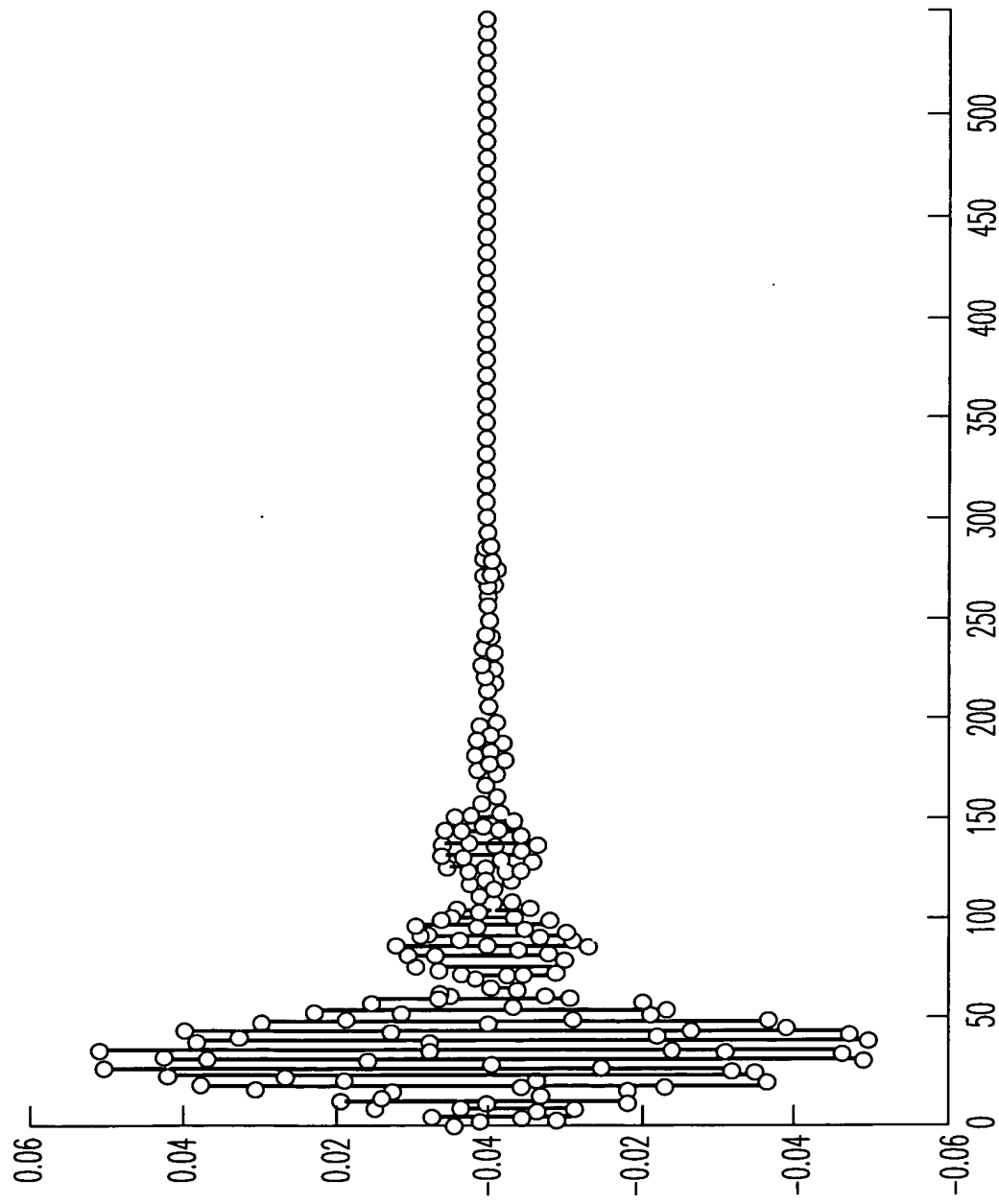


FIG. 7

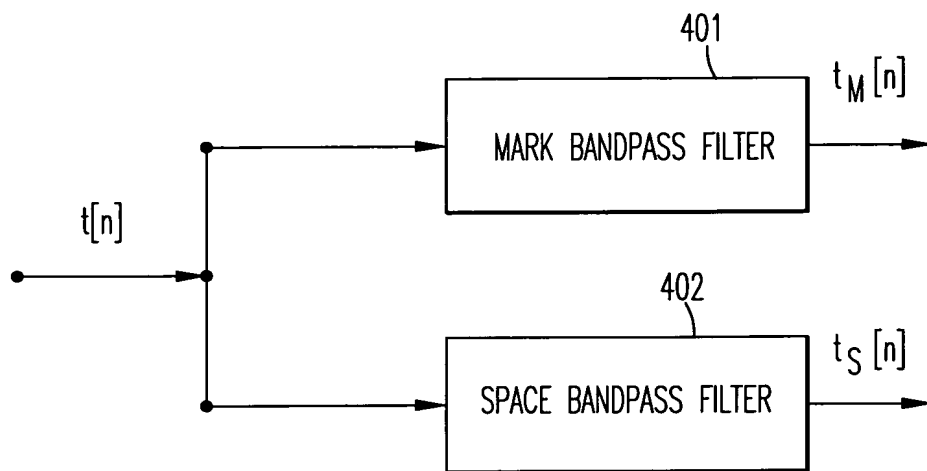


FIG. 4

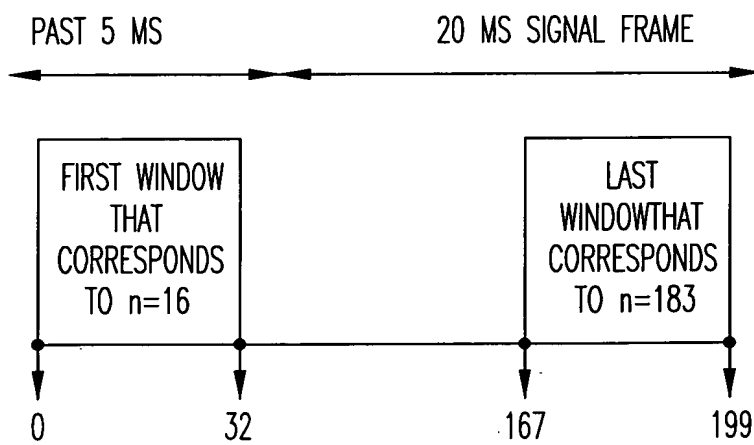
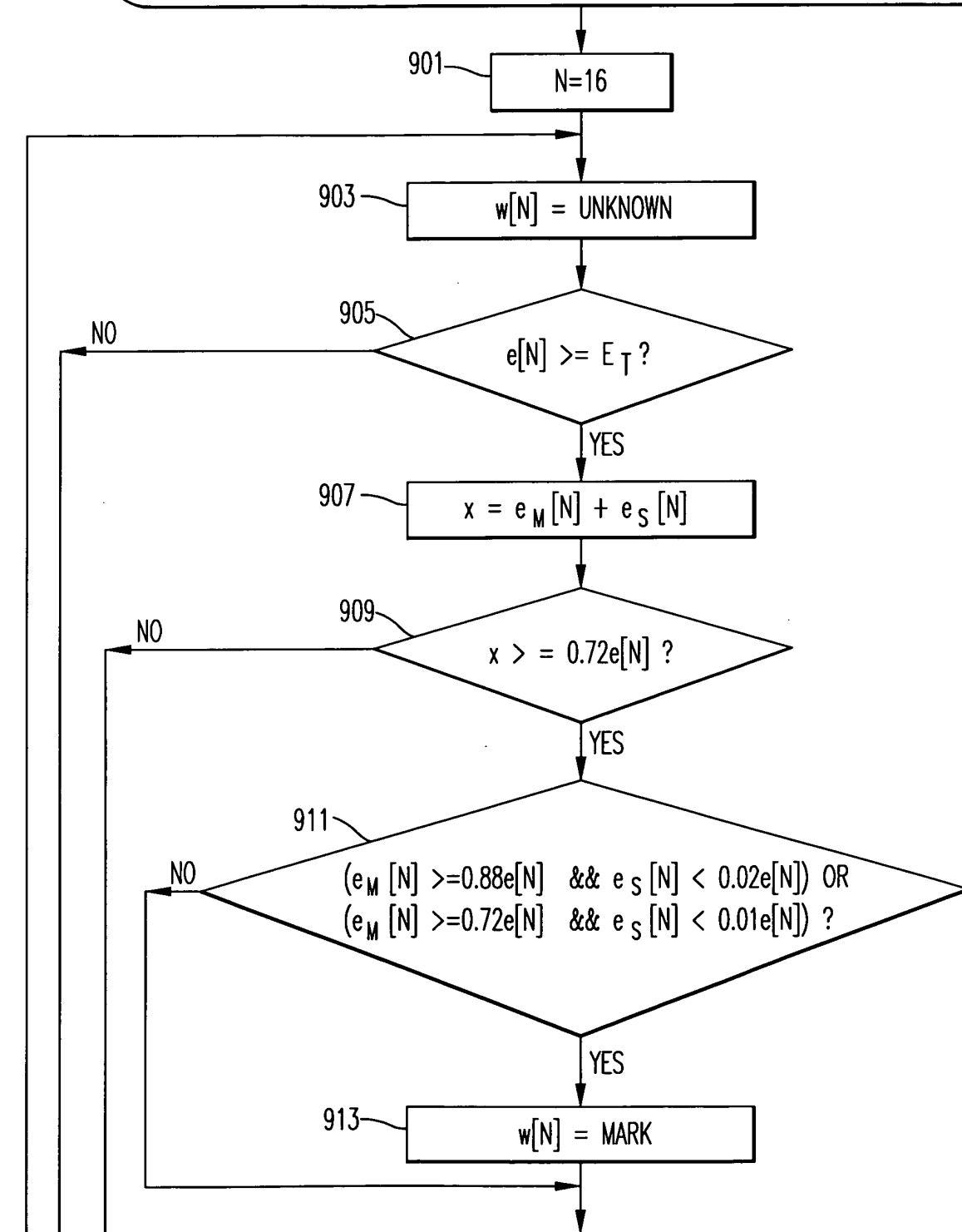


FIG. 8

INPUTS: LOCAL ENERGY $e[n]$ OF INPUT SIGNAL, LOCAL ENERGY $e_M[n]$ OF MARK FILTER OUTPUT, AND LOCAL ENERGY $e_S[n]$ OF SPACE FILTER OUTPUT FROM $n=16$ TO $n=183$



CONTINUED ON FIG. 9B

FIG. 9A

009260" E326966

CONTINUED FROM FIG. 9A

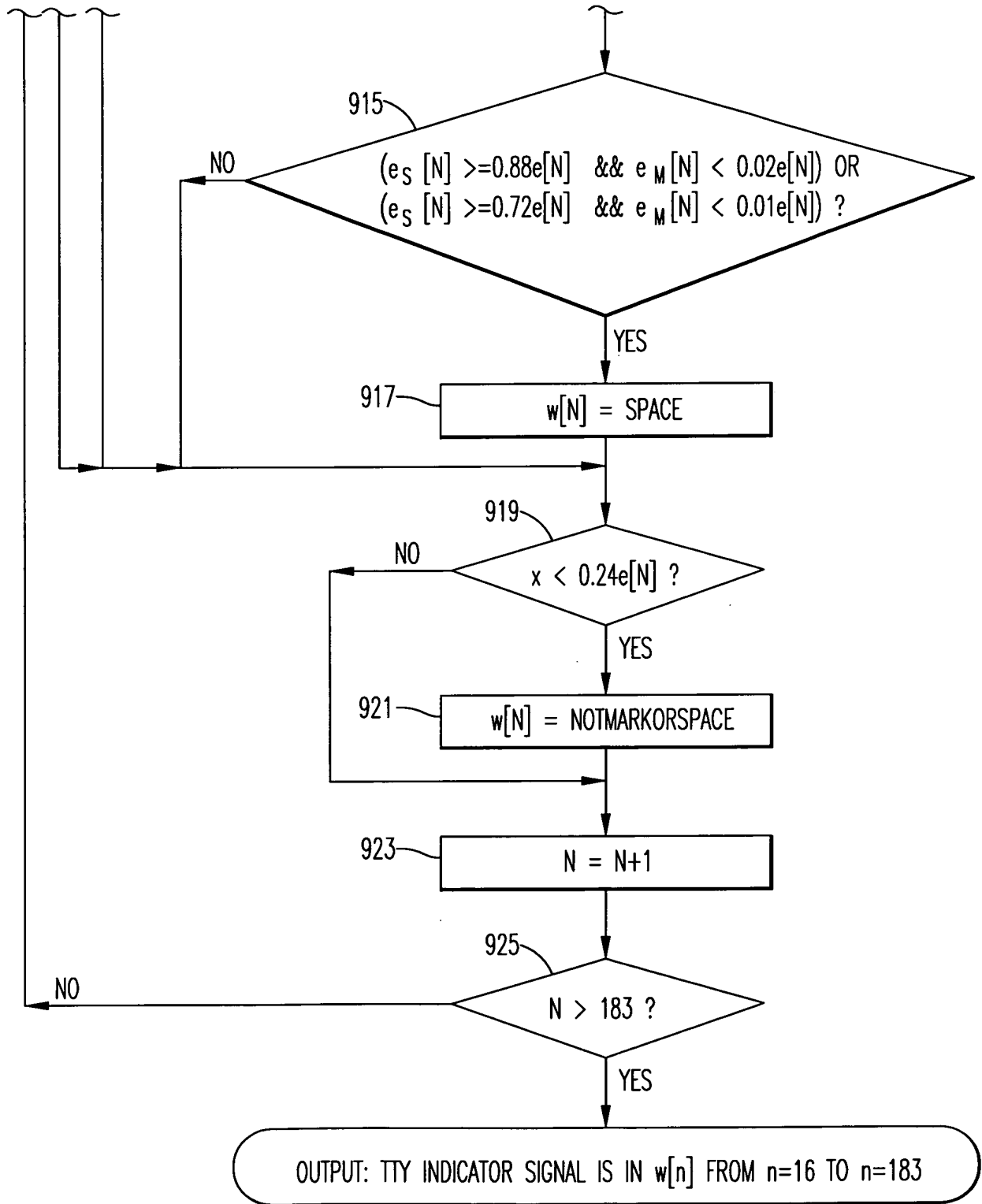


FIG. 9B

INPUTS: TTY INDICATOR SIGNAL $w[n]$, LOCAL SIGNAL ENERGY $e[n]$, LOCAL MARK FILTER OUTPUT ENERGY $e_M[n]$, LOCAL SPACE FILTER OUTPUT ENERGY $e_S[n]$ FOR $n=16$ TO $n=183$

1001 $N=20$

1003 $v[N] = w[N]$

1005 $c_M = \text{\#MARK'S IN } w[n] \text{ FROM } N-4 \text{ TO } N+4$
 $c_S = \text{\#SPACE'S IN } w[n] \text{ FROM } N-4 \text{ TO } N+4$

1007 $d[N] = \text{AVERAGE OF } e[n] \text{ FROM } N-4 \text{ TO } N+4$
 $d_M[N] = \text{AVERAGE OF } e_M[n] \text{ FROM } N-4 \text{ TO } N+4$
 $d_S[N] = \text{AVERAGE OF } e_S[n] \text{ FROM } N-4 \text{ TO } N+4$

1009 $w[N] \neq \text{MARK} \ \&\& \ c_M \geq 5?$

NO

YES

1011 $(d_M[N] \geq 0.88d[N] \ \&\& \ d_S[N] < 0.02d[N]) \text{ OR } (d_M[N] \geq 0.72d[N] \ \&\& \ d_S[N] < 0.01d[N]) ?$

NO

YES

1013 $v[N] = \text{MARK}$

CONTINUED ON FIG. 10B

FIG. 10A

009260" E926960

CONTINUED FROM FIG. 10A

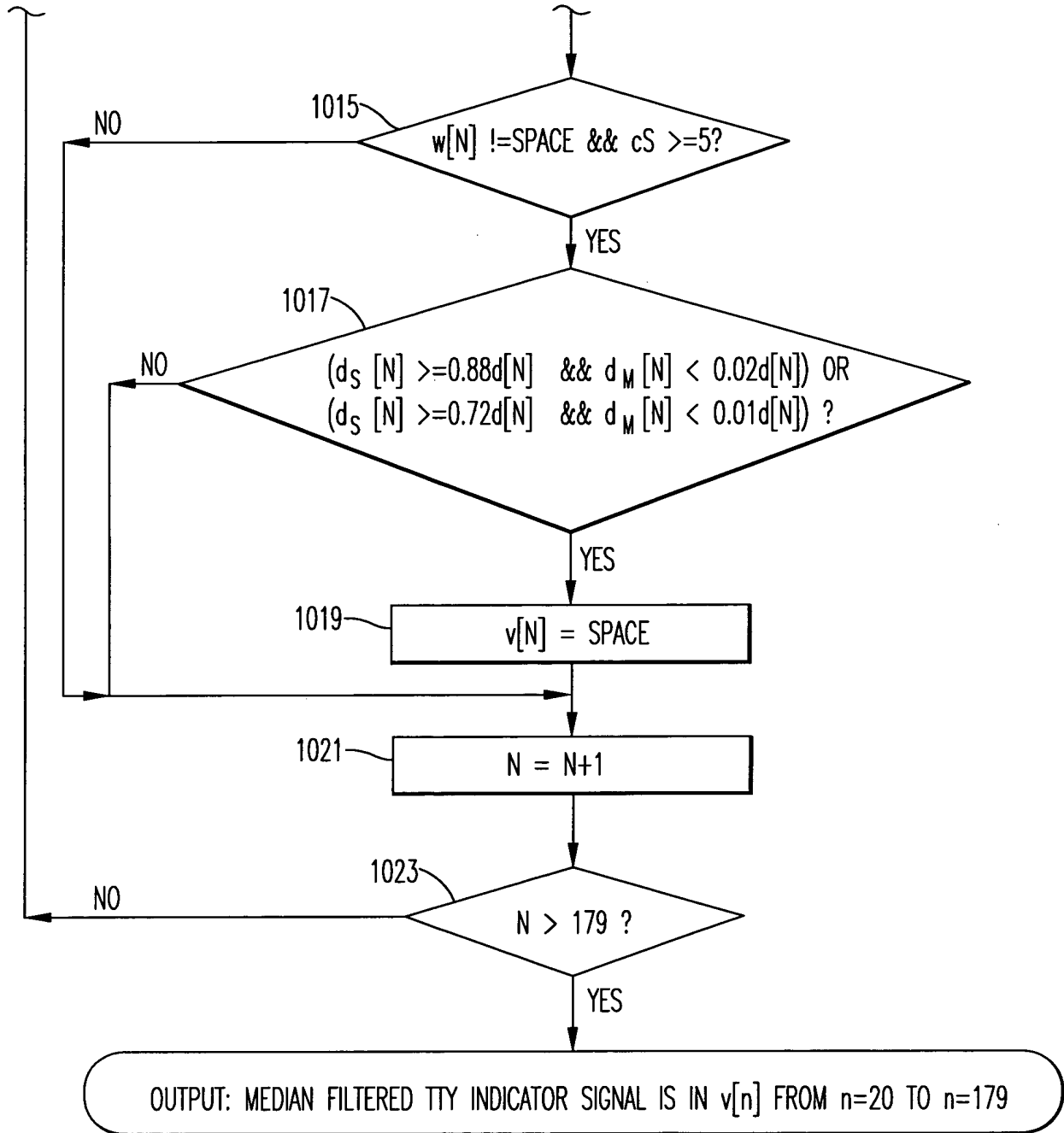
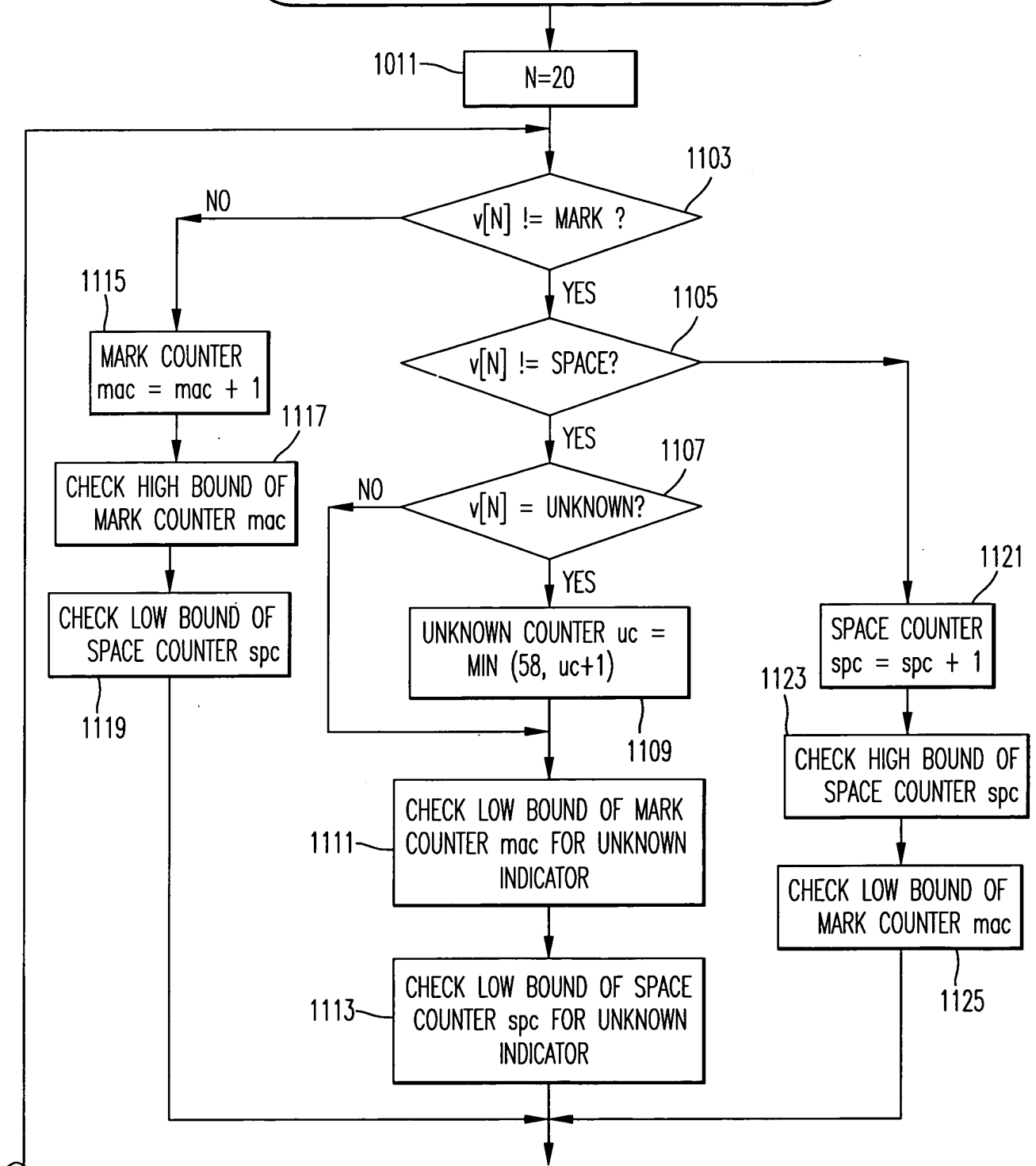


FIG. 10B

INPUTS: MEDIAN FILTERED TTY INDICATOR SIGNAL $v[n]$
FROM $n=20$ TO $n=179$, CHARACTER BIT ARRAY c ,
CHARACTER BIT ARRAY COUNTER nc , MARK COUNTER mac ,
SPACE COUNTER spc , AND UNKNOWN COUNTER uc



CONTINUED ON FIG. 11B

FIG. 11A

009260" 38269960

CONTINUED ON FIG. 11A

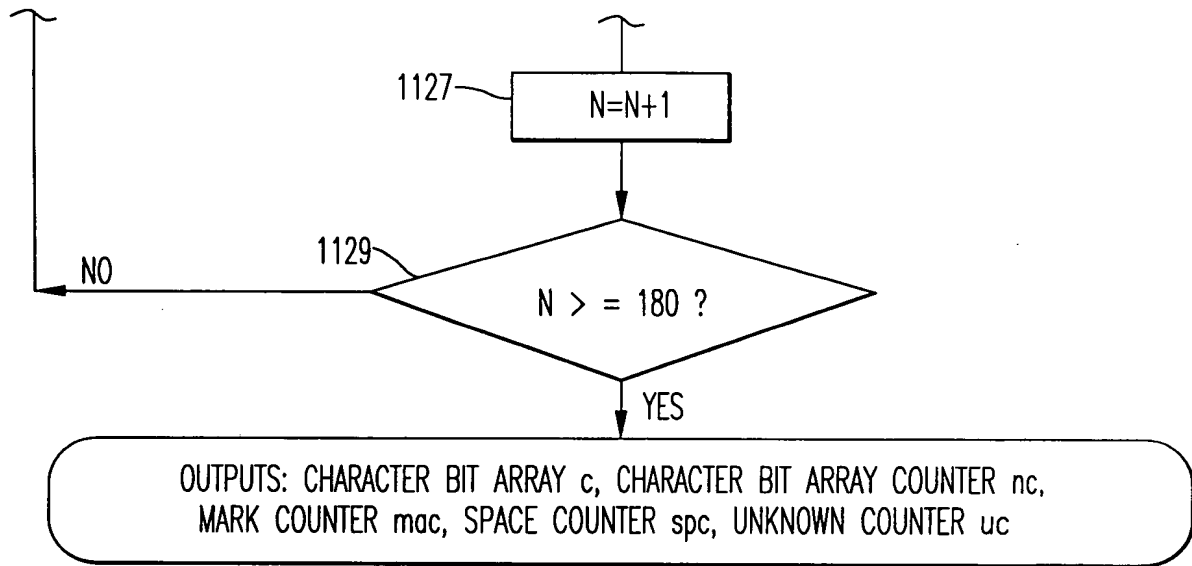


FIG. 11B

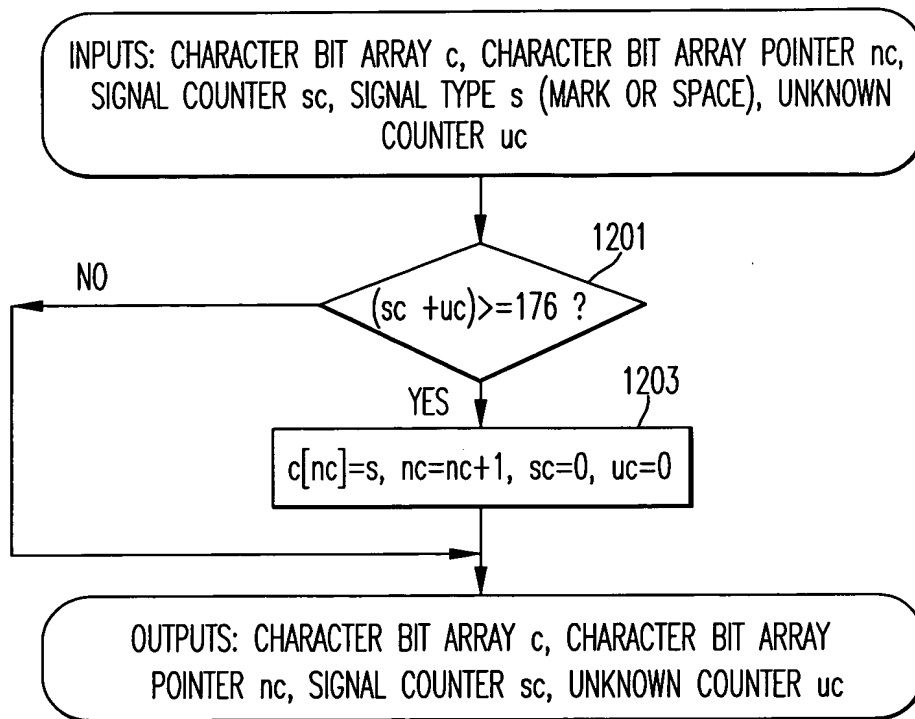


FIG. 12

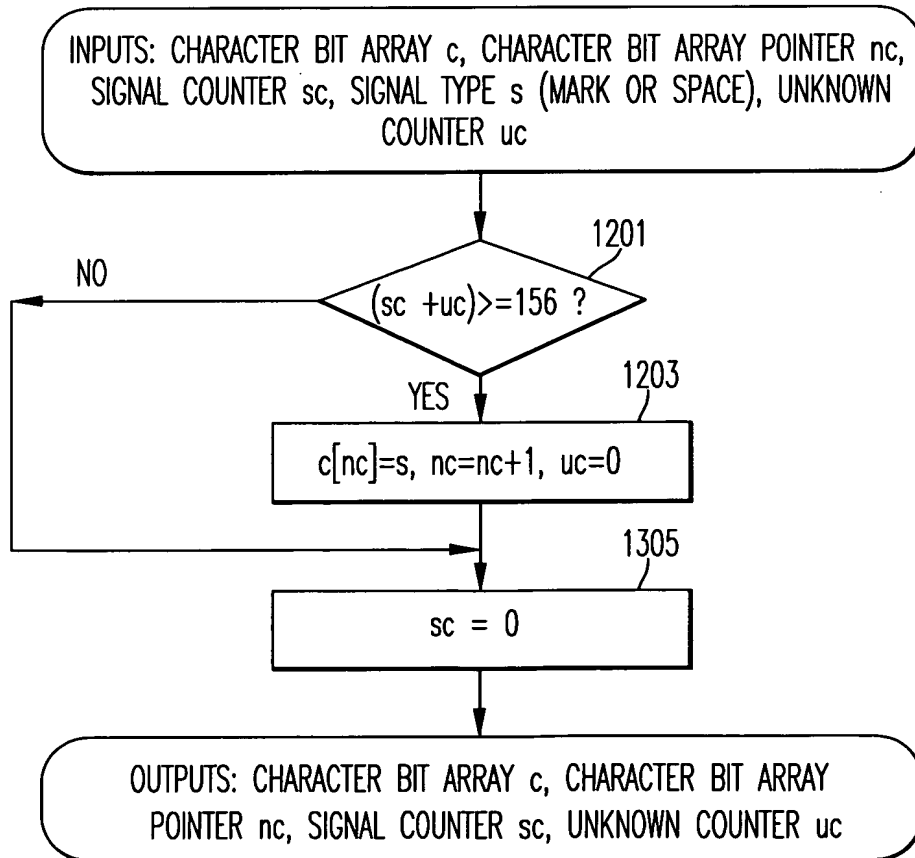


FIG. 13

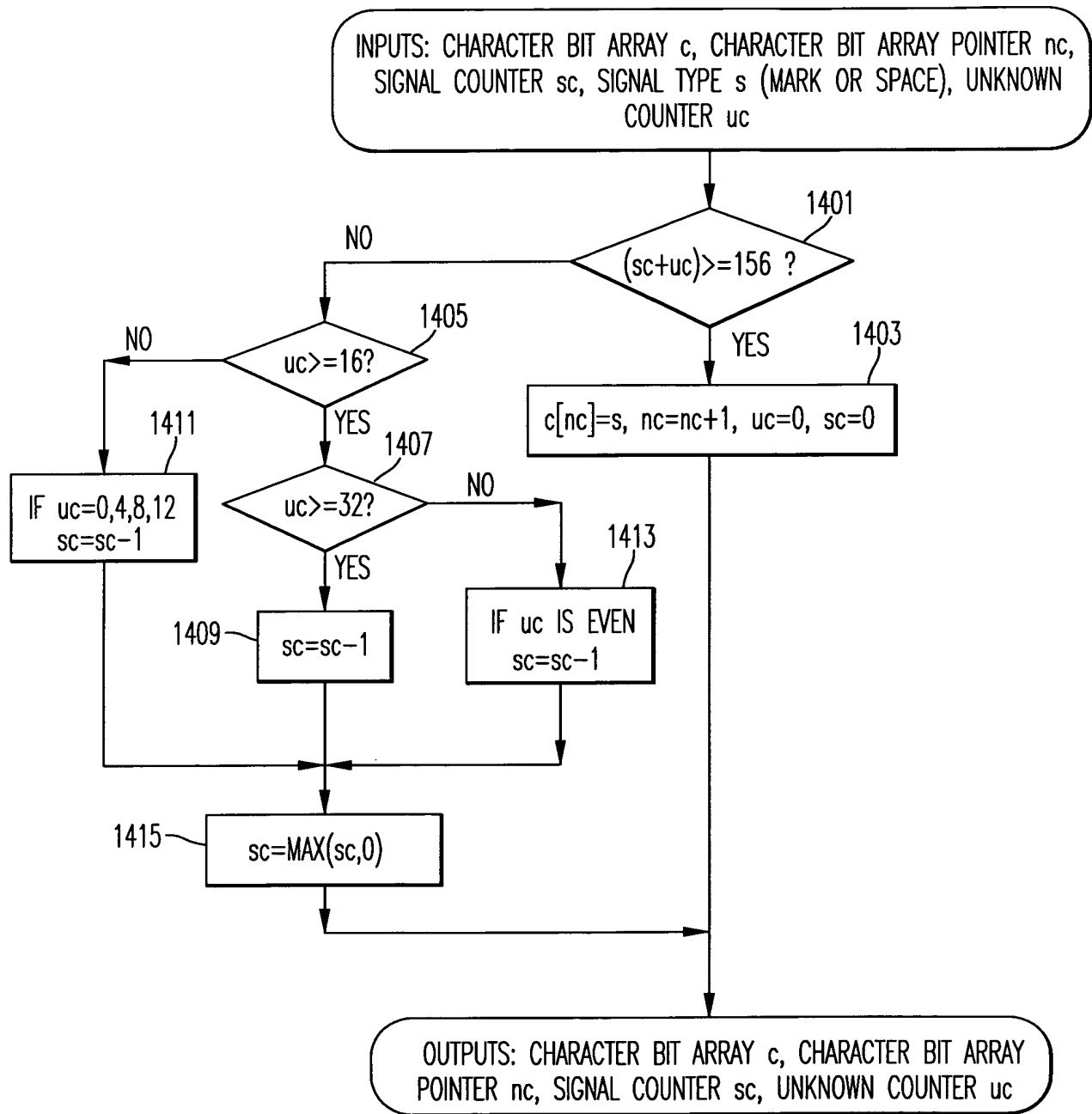
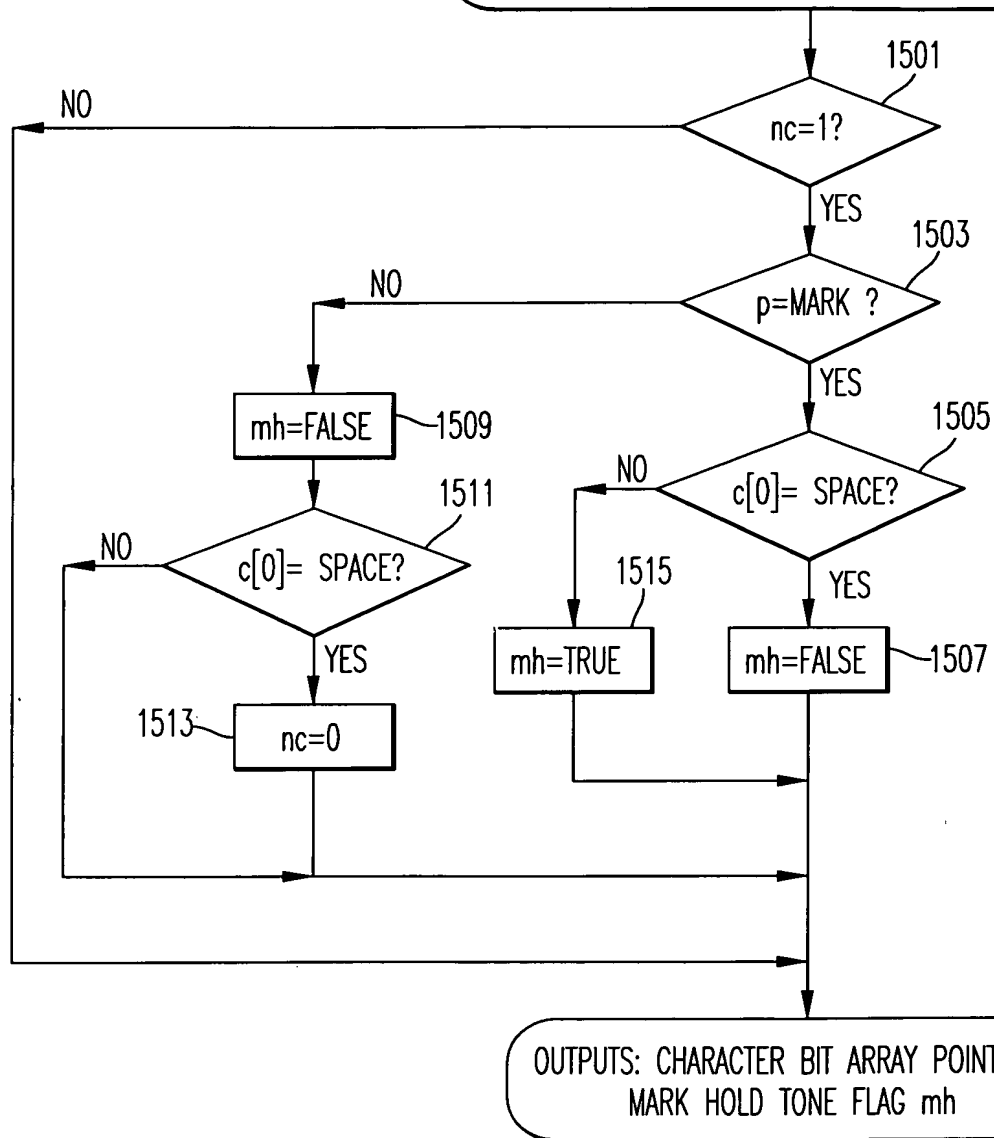
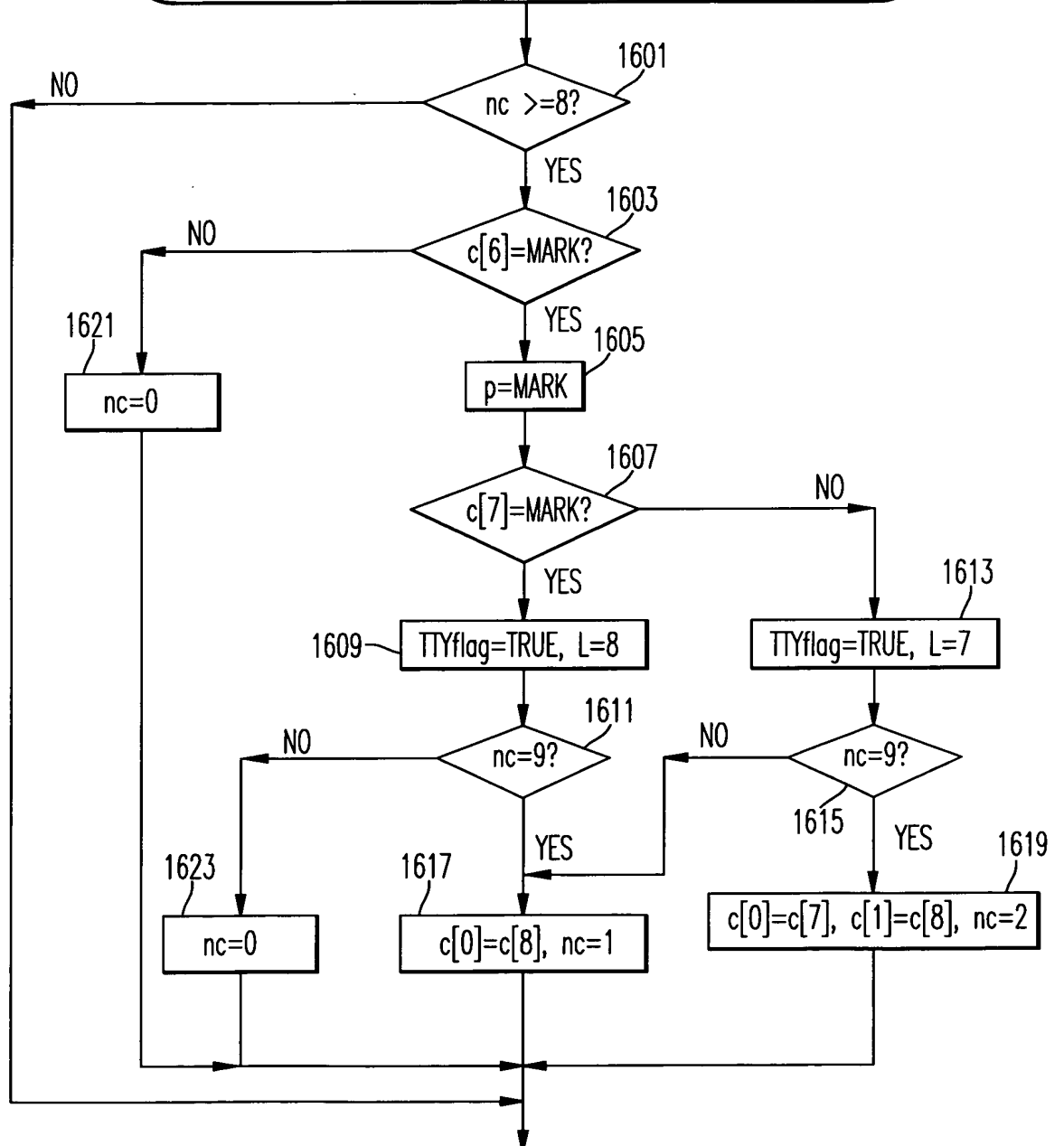


FIG. 14

INPUTS: CHARACTER BIT ARRAY c, CHARACTER BIT ARRAY
POINTER nc, PREVIOUS CHARACTER LAST BIT p, MARK
HOLD TONE FLAG mh



INPUTS: CHARACTER BIT ARRAY c , CHARACTER BIT ARRAY POINTER nc ,
LAST BIT OF PREVIOUS CHARACTER p , TTY CHARACTER FLAG $TTYflag$

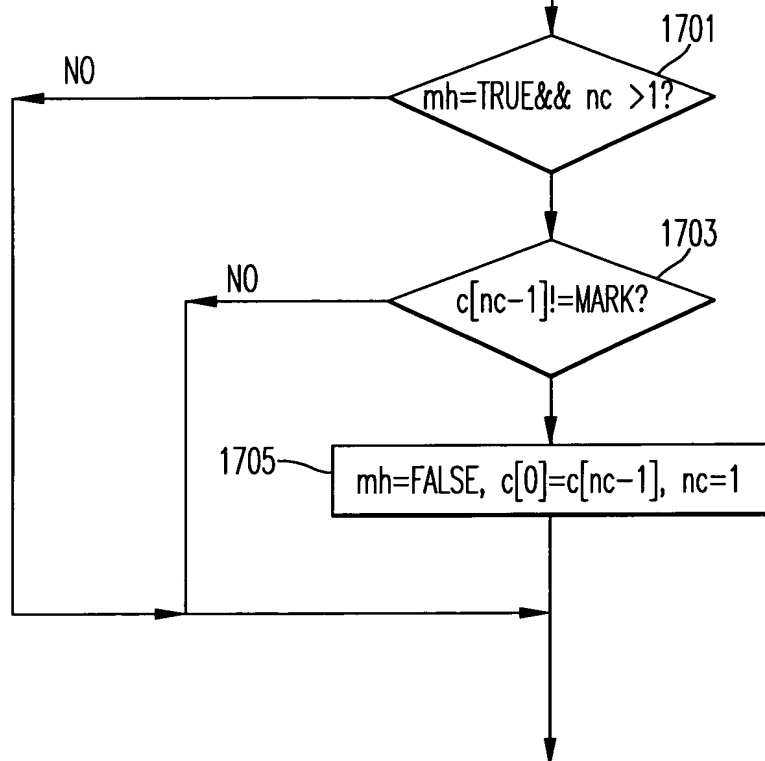


OUTPUTS: CHARACTER BIT ARRAY c , CHARACTER BIT ARRAY POINTER nc , LAST BIT OF
PREVIOUS CHARACTER p , TTY CHARACTER FLAG $TTYflag$, TTY CHARACTER BIT LENGTH L

FIG. 16

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INPUTS: CHARACTER BIT ARRAY c , CHARACTER BIT
ARRAY POINTER nc , MARK HOLD TONE FLAG mh



OUTPUTS: CHARACTER BIT ARRAY c , CHARACTER BIT
ARRAY POINTER nc , MARK HOLD TONE FLAG mh

FIG. 17

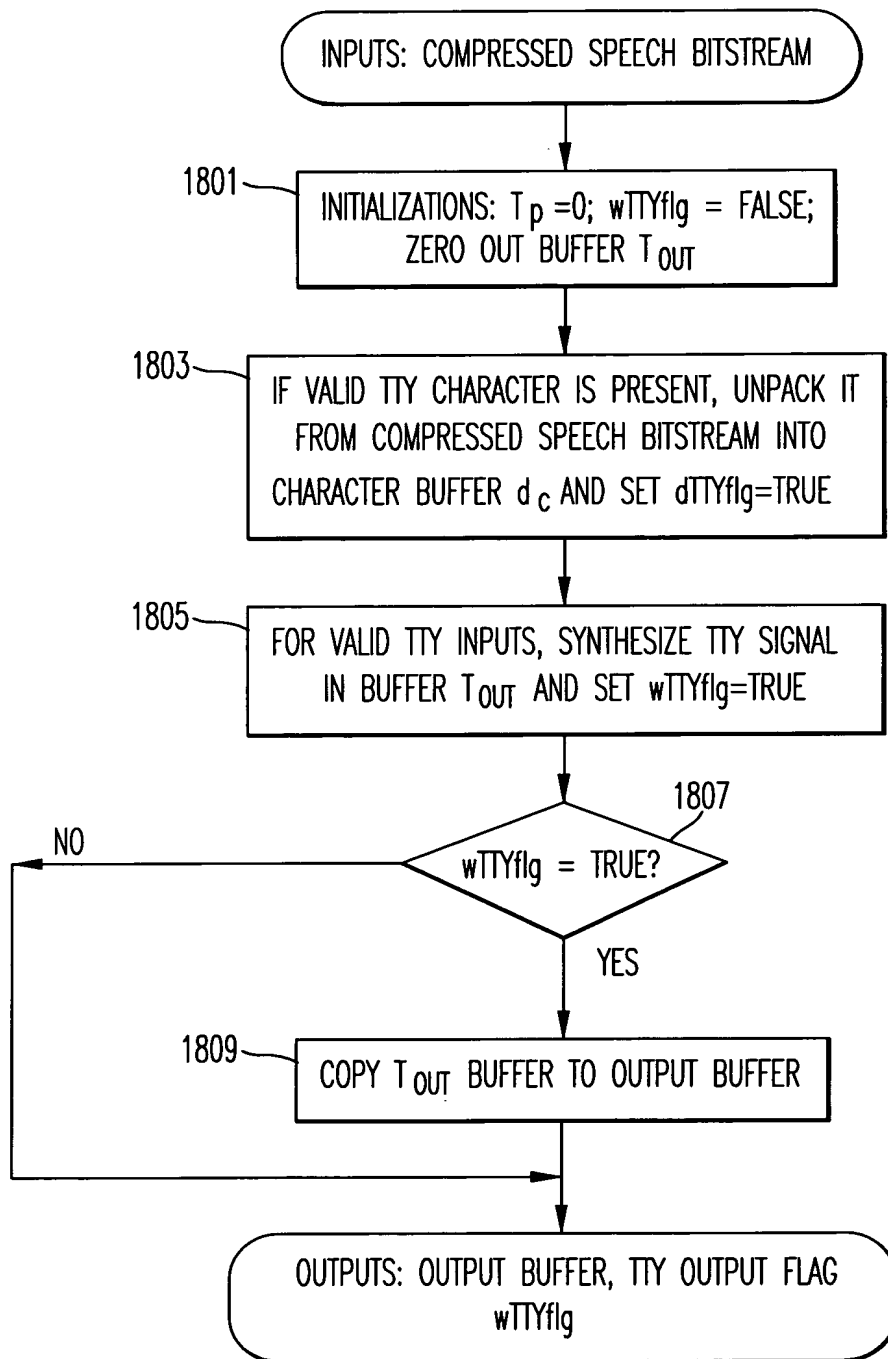


FIG. 18

INPUTS: CHARACTER BIT ARRAYS d_c , cb , ocb AND ocb POINTER $ocbptr$; SYNTHESIS BUFFER T_{out} AND ITS POINTER T_p ; SYNTHESIS PARAMETERS dc , ph , F ; CONTROL FLAGS $dTTYflg$, $cbeflg$, $ocbeflg$, $wTTYflg$

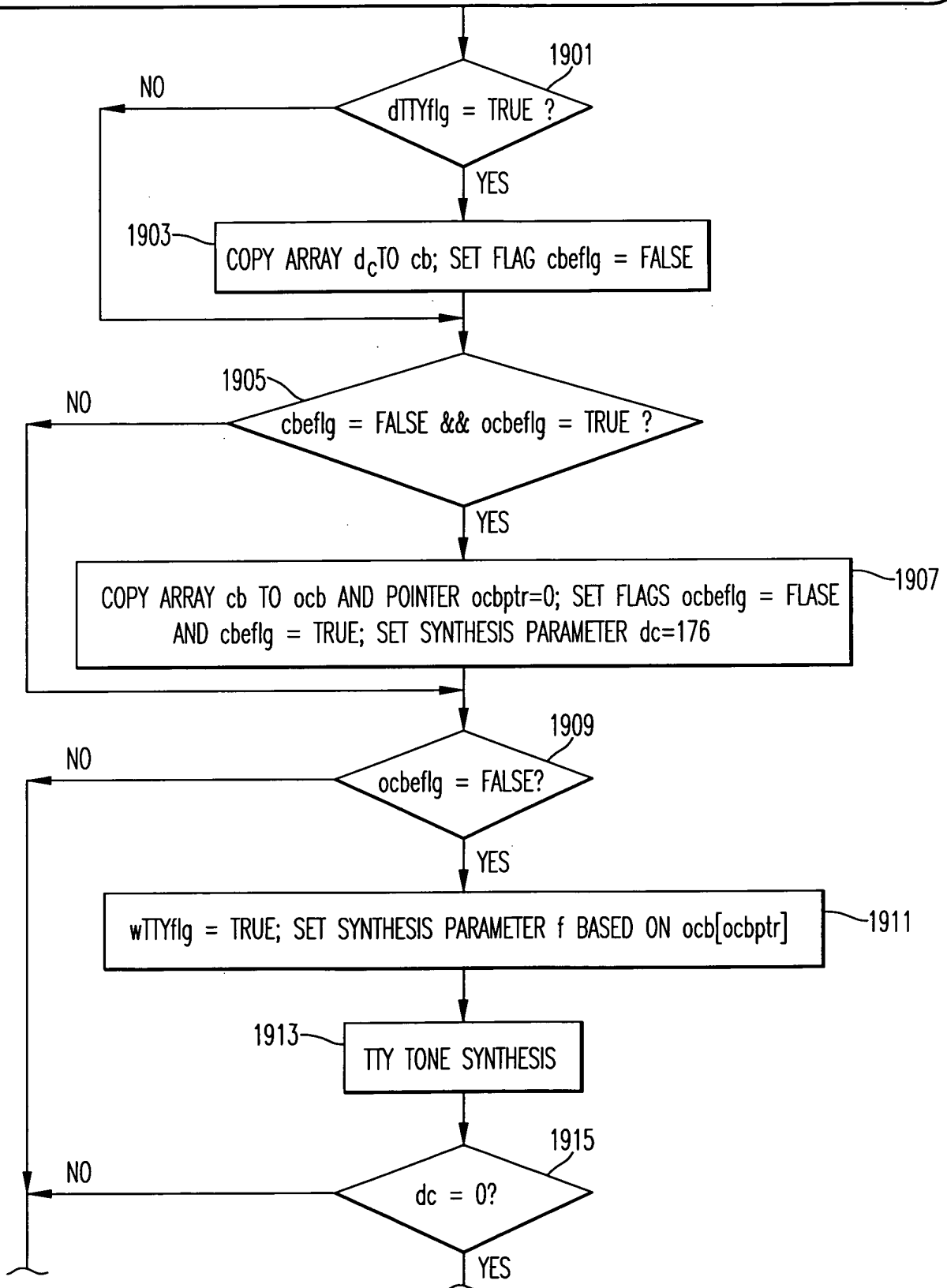


FIG. 19A

CONTINUED FROM FIG. 19A

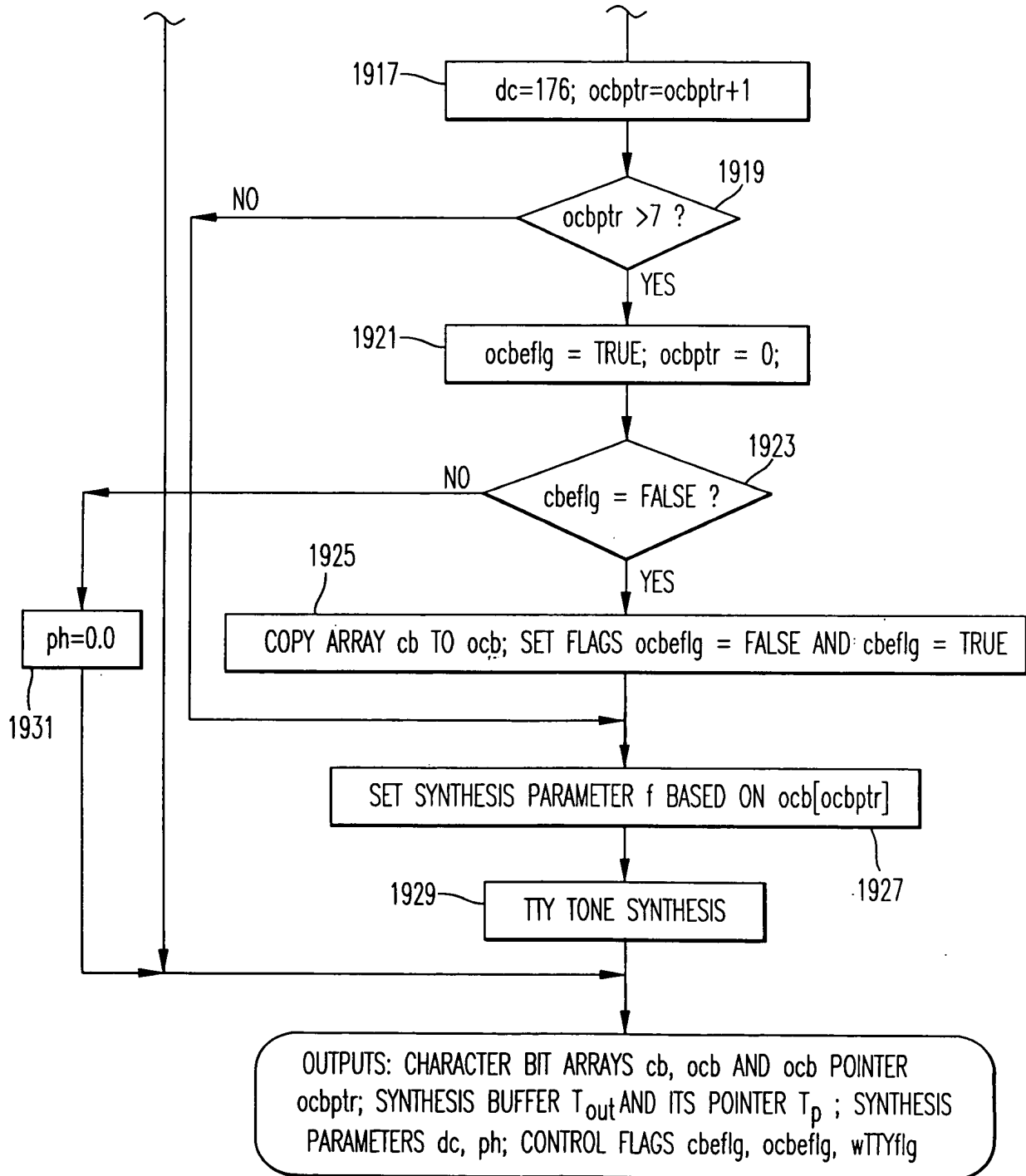


FIG. 19B

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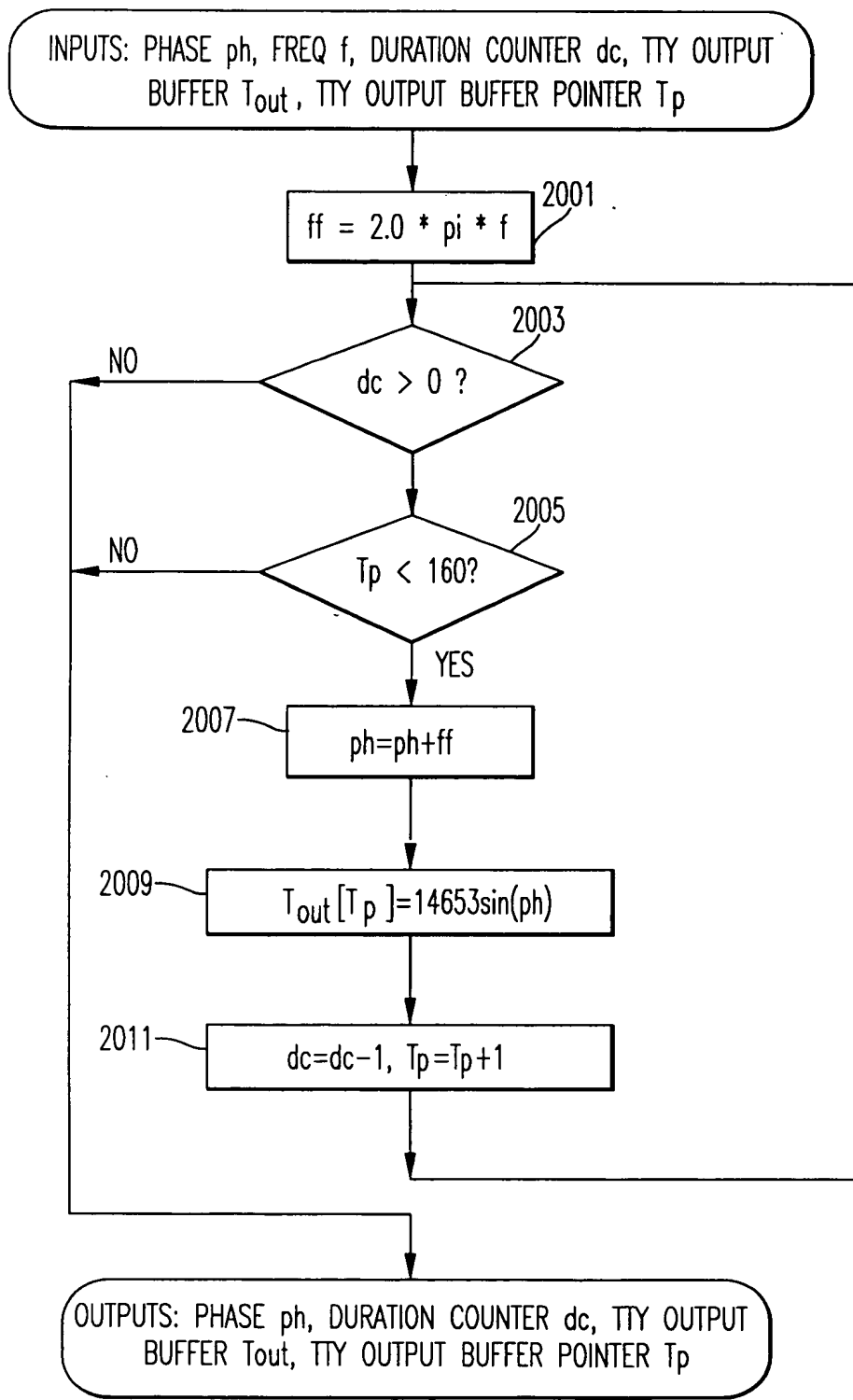


FIG. 20

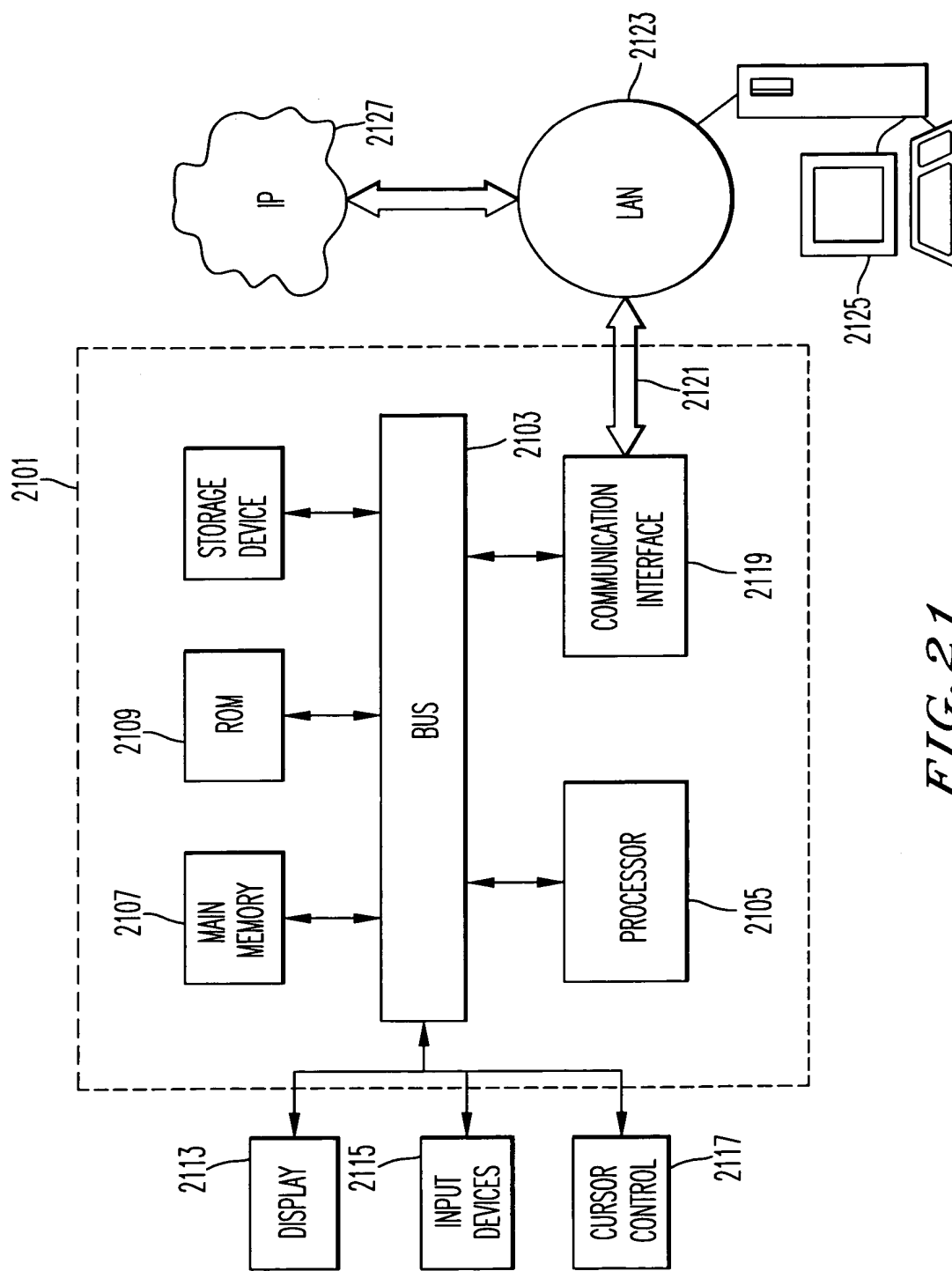


FIG. 21